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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,625	10/22/2001	Stephen J. Hawkins	56937US002	1418

32692 7590 04/11/2008
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EXAMINER	
DESAI, ANISH P	
ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
04/11/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com
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Office Action Summary	Application No.	Applicant(s)	
	10/014,625	HAWKINS ET AL.	
	Examiner	Art Unit	
	ANISH DESAI	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24,26-28,30-45 and 47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24,26-28,30-45 and 47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on 12/21/07, PROSECUTION IS HEREBY REOPENED.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing.

2. The 35 USC Section 103 (a) rejections made by the previous Examiner based on Babu et al. (US 5,112,882) in view of Davison (US 3,970,771), and further in view of St. Coeur et al. (US 6,048,610) are withdrawn in view of the arguments presented in the Appeal Brief. Specifically, none of the crosslinking agents recited in St.Coeur are useful for any type of reacting in which actinic radiation is used. Additionally, there is no disclosure in Babu that the primer layer is cured by radiation.

3. A new 35 USC Section 103(a) rejection based on Babu et al. (WO 93/1184) in view of Davison (US 3,970,771) and Bragole (US 4,859,540) is made.

4. A new 35 USC Section 112-first paragraph rejection is made.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 24, 26-28, 30-45, and 47 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

6. Independent claim 45 recites a primer comprising "a maleated rubber thermoplastic elastomer", "a non-halogenated polyolefin", and "a resin having a glass transition temperature between about 0°C to about 100°C". Further this claim recites "a first crosslinking agent" and "a second crosslinking agent". It appears from the specification that Applicant has disclosed specific types of maleated rubber thermoplastic elastomers (see page 6 of the specification), non-halogenated polyolefins (page 7), resin having Tg of between 0°C to about 100°C (page 7), and crosslinking agents (pages 6 and 8). Therefore, the subject matter contained in the claim is not

sufficient to permit those skilled in the art to make and use the claimed invention without undue experimentation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 24, 26-28, 30, 31, 37-45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babu et al. (WO 93/1184) in view of Davison (US 3,970,771) and Bragole (US 4,859,540).

8. Regarding claim 45, Babu teaches a PSA tape and a method of making PSA tape. The PSA tape of Babu includes a radiation curable PSA that is applied onto a support (abstract and page 17 lines 11-24). Additionally, Babu discloses that in some applications primers may be useful for improving the adhesion of the adhesive to some substrates. According to Babu "Useful primers for the practice of the present invention include triblock copolymer of styrene-ethylene/butylene-styrene grafted with maleic anhydride...and a combination of amorphous polypropylene [non-halogenated polyolefin] and Kraton [trademark] G1901X [which is maleated rubber theromplastic elastomer] copolymer." (page 17 lines 34-37 to page 18 lines 1-3). This disclosure of Babu renders claim limitations of providing a substrate, applying a primer to the substrate wherein the primer comprises a maleated rubber thermoplastic elastomer and a non-halogenatd polyolefin, applying a PSA atop the primer wherein PSA comprises

polyolefins (see abstract of Babu) and crosslinking agent that may be activated by actinic radiation (see abstract and entire document of Babu). Additionally, as to the step (d), Babu discloses crosslinking of adhesive using radiation (pages 13-14).

9. With respect to claim 45, the difference between the claimed invention and the prior art of Babu is that Babu is silent as to teaching primer comprising a resin having Tg of between about 0°C and about 100°C, a first crosslinking agent that is activated by actinic radiation, and applying actinic radiation to crosslink the primer. However, Davison discloses a substrate that is coated with mixed resin primer comprising a block copolymer. The primer of Davison comprises hydrogenated block copolymer and a resin that is compatible with the non-elastomeric blocks of the copolymer and, in some instances including carboxylated resin (abstract). Further, Davison's invention is trying to improve the bonding between "low energy' substrate such as polyolefins and coatings using primer of his invention (see Background of the Invention). Moreover, Davison discloses end block compatible first resins such as coumarone-indene (identified by Cumar LX 509 see Example 1 of Davison), olefinic hydrocarbon resin etc. (see column 2 lines 39-57). It is noted that Cumar LX 509 resin as taught by Davison has Tg of about 88°C as evidenced by column 5 lines 54-58 of Hansen (US 4,141,876). It is noted that the primer of Babu includes block copolymers which is used to improve adhesion of the adhesive to some substrates (possibly polyolefins). The secondary reference of Davison is trying improve the bonding between "low energy' substrate such as polyolefins and coatings using primer of his invention (see Background of the Invention). Further, the primer of Davison includes block copolymers and resin such as

coumarone-indene. Thus, it would have been obvious to use the resin such as coumarone-indene with Tg of between 0°C and 100°C in the primer of Babu, motivated by the desire to form a primer composition that can be useful in bonding substrates of Babu to the PSA.

10. Additionally, regarding claim 45, Babu as modified by Davison is silent as to teaching of providing a primer with a first crosslinking agent that may be activated by actinic radiation and applying actinic radiation to crosslink the primer. However, Bragole discloses chlorinated polyolefins or other halogen containing products alone or in admixture with one another that are coated as primers on a solid or foamed polyolefin surface. The primed surface is irradiated and an adhesive bonded to the primer (abstract). According to Bragole "It is believed that the primer becomes engrafted to the polyolefin substrate surface and cross-links during continual exposure to irradiation...The net effect is (1) a stronger union of the primer to the polyolefin surface than is possible without irradiation...adhesives." (column 2 lines 7-20). Further, as a crosslinking agents that can be activated by actinic radiation, Bragole discloses benzophenone, fluorene etc. (column 10 lines 30-43) that are added to the primer. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the crosslinking agent as taught by Bragole and irradiation process as employed in Bragole to crosslink the primer layer, motivated by the desire to improve the adhesion of the between the substrate and the primer.

11. As to claim 24, Babu discloses Applicant's preferred Kraton (trademark) G-190X copolymer. Regarding claim 26, as previously noted Davison discloses olefinic

hydrocarbon resin at column 2 line 41. Thus, it would have been obvious to use the hydrocarbon resin as taught by Davison, motivated by the desire to provide primer composition that can be useful in bonding the low surface energy substrates (e.g. polyolefins) of Babu to the PSA. With respect to claim 27, the primer of Babu includes polypropylene (page 18 lines 1-5). As to claim 28, while Babu does not explicitly teach polyhexene or polyoctene in primer, it is noted that the primer of Babu generally includes polyolefin such as polypropylene, therefore in the absence of unexpected results choosing olefins such as polyhezene or polyoctene would involve routine skill in the art. With respect to claim 30, the reference of Bragole discloses crosslinking agents such as benzophenone that are added to the primer layer (column 10 lines 30-43) which read on ketone as claimed. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the crosslinking agent as taught by Bragole and irradiation process as employed in Bragole to crosslink the primer layer, motivated by the desire to improve the adhesive of the primer to adhesive. Regarding claim 31, in absence of unexpected results selecting a known crosslinking agent to crosslink a primer layer involves routine skill in the art depending on the intended use. With respect to claims 37-39, abstract, page 4 lines 25-37, page 7 lines 1-17 and lines 30-35 of Babu read on these claims. Regarding claim 40, this limitation is taught at page 5 lines 12-20 of Babu. As to claim 41, page 14 lines 35-37 to page 15 lines 1-38 discloses addition of tackifiers in PSA of Babu. With respect to claims 42-44, the abstract, page 5 lines 1-7, page 11 lines 25-37 to page 12 lines 1-15, and page 17 lines 14-25 of Babu disclose these claims limitations.

12. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babu et al. (WO 93/1184) in view of Davison (US 3,970,771) and Bragole (US 4,859,540) as applied to claim 45 above, and further in view of Mori et al. (US 5,037,885).

13. The invention of Babu as modified by Davison and Bragole is previously disclosed. Babu is silent as to teaching primer further comprising epoxy resin as claimed in claims 32 and 33. However, Mori discloses a two part primer composition comprising at least one block copolymer such as SEBS and a curing component comprising an epoxy resin having two or more functional groups, which has excellent heat-resistance adhesion and durable adhesion and it is suitable for adhering between polyolefinic substances or between polyolefinic substance and other organic substance (abstract). The epoxy resin as taught at column 2 lines 34-55 of Mori is believed to be at least one of the epoxies as claimed in claim 32 and 33. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add the epoxy resin in the primer of Babu motivated by the desire to improve the adhesion of the primer to the polyolefin substrates.

14. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Babu et al. (WO 93/1184) in view of Davison (US 3,970,771) and Bragole (US 4,859,540) as applied to claim 45 above, and further in view of Groves (US 5,677,376).

15. The invention of Babu modified by Davison and Bragole is previously disclosed. Babu is silent as to teaching primer further comprising multifunctional acrylate, fumed

amorphous silica, and a filler. However, Groves discloses a polymer blend comprising a block copolymer and (b) a polymer comprising a polymerization reaction product of two or more mono-ethylenically unsaturated monomers in which at least one of the monomers is acrylic or methacrylic ester…at least one of the monomers is a nitrogen-containing monomer (see abstract). The polymer blends of Groves are useful as adhesives, primers, ink etc. (column 1 lines 10-22). Additionally blends of Groves include filler such as silica (column 4 lines 35-36), which is believed to be fumed amorphous silica as claimed or such is obvious variants of silica as taught by Groves. The polymers (b) as taught by Groves read on multifunctional acrylate or such is obvious variant of acrylic polymers taught by Groves. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the multifunctional acrylate, filler, and silica as taught by Groves in the primer of Babu as modified by Davison and Bragole, motivated by the desire to form a primer that is useful in bonding the PSA and substrate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Hai Vo can be reached on 571-272-1485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./
Examiner, Art Unit 1794

/Hai Vo/
Hai Vo
Primary Examiner, Art Unit 1794